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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,573	03/22/2001	Hector F. DeLuca	1256-00721	9707

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EXAMINER

JIANG, SHAOJIA A

ART UNIT

PAPER NUMBER

1617

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/815,573

Applicant(s)

DELUCA ET AL.

Examiner

Shaojia A. Jiang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 27, 2004 has been entered.

This Office Action is a response to Applicant's request for continued examination (RCE) filed December 27, 2004, and amendment and response, filed December 27, 2004 wherein claims 8-14 have been amended. Claims 1-7 are cancelled previously.

Currently, claims 8-14 are pending in this application.

Claims 8-14 are examined on the merits herein.

Applicant's amendment changing the limitation in claim 8 filed on December 27, 2004 with respect to the rejection of claims 1 and 12-13 made under 35 U.S.C. 102(b) as being anticipated by DeLuca et al. (4,338,312) for reasons of record stated in the Office Action dated September 22, 2004 have been considered and found persuasive to remove this particular rejection. Therefore, the said rejection is withdrawn.

Applicant's amendment changing the limitation in claim 8 filed on December 27, 2004 with respect to the rejection of claims 1 and 12-13 made under 35 U.S.C. 102(b)

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as being anticipated by DeLuca et al. (4,110,446) for reasons of record stated in the Office Action dated September 22, 2004 have been considered and found persuasive to remove this particular rejection. Therefore, the said rejection is withdrawn.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deluca et al. (WO 96/24258 of record).

Deluca et al. discloses a method of improving utilization of phosphorus as to reducing or minimizing or perhaps eliminating dietary requirements of phosphorus in animals (abstract, page 3 lines 13-15) such as cattle or cow including dairy cow (see particularly page 10 line 10) comprising feeding with the instant 1 $\alpha$ -hydroxylated vitamin D compound (see page 7-8 in particular) in the effective amounts, about 5-40  $\mu$ g/kg, within the instant claim (see page 10 line 20-22; claim 12), may be in a form of top dressing (see page 9 line 3). See also abstract, page 5 line 30 to page 6 line 3, page 9 line 15-17, and claims 18-20.

DeLuca et al. teaches that "low phosphorus containing animal feeds reduce the polluting effects on the environment since less phosphorus is excreted in the animal's feces which are then spread on agricultural land" (see abstract).

DeLuca et al. do not expressly disclose the method therein comprising replacing all inorganic phosphorus in a diet with the known effective amount of  $1\alpha$ -hydroxylated vitamin D of prior art. DeLuca et al. do not expressly disclose that said feed contains 0% by weight of an inorganic phosphorus supplement.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to motivated to replace all inorganic phosphorus in a diet with the known effective amount of  $1\alpha$ -hydroxylated vitamin D of prior art, and said feed containing 0% by weight of an inorganic phosphorus supplement.

One having ordinary skill in the art at the time the invention was made would have been motivated to replace all inorganic phosphorus in a diet with the known effective amount of  $1\alpha$ -hydroxylated vitamin D of prior art, and said feed containing 0% by weight of an inorganic phosphorus supplement, since the known method of improving utilization of phosphorus as to reducing or minimizing or perhaps eliminating dietary requirements of phosphorus in animals in dairy cow comprising feeding with the same effective amount of  $1\alpha$ -hydroxylated vitamin D compound, about 5-40  $\mu\text{g/kg}$ , has been disclosed by DeLuca et al.

Thus, DeLuca et al. is seen to clearly provide the motivation for the instant method by eliminating dietary requirements of phosphorus or replacing all inorganic

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phosphorus in a diet, by administering the same effective amount of the same vitamin D compound to the same dairy cow.

DeLuca et al. have further provided the motivation for eliminating or replacing all inorganic phosphorus in a diet for the sake of eliminating or reducing the pollution of phosphorus, by teaching that "low phosphorus containing animal feeds reduce the polluting effects on the environment since less phosphorus is excreted in the animal's feces which are then spread on agricultural land".

Thus the claimed invention as a whole is clearly prima facie obvious over the cited prior art.

Applicant's arguments filed December 27, 2004 with respect to the rejections of record in the Office Action September 22, 2004 have been considered but are moot in view of the new ground(s) of rejection above.

Additionally, Applicant's results on testing the instant vitamin D compounds in the specification at pages 13-17 have been fully considered with respect to the nonobviousness and/or unexpected results of the claimed invention but are not deemed persuasive. The results of Tables 2-4 at pages 15-17 showing the effects of the instant vitamin D compounds are clearly expected for the instant claimed method based on the cited prior art. Therefore, the results herein are clearly expected and not unexpected based on the cited prior art. Expected beneficial results are evidence of obviousness. See MPEP § 716.02(c). Results herein provide no clear and convincing evidence of nonobviousness or unexpected results over the cited prior art. Therefore, the evidence

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presented in specification herein is not seen to support the nonobviousness of the instant claimed invention over the prior art.

In view of the rejections to the pending claims set forth above, no claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jiang, whose telephone number is (571)272-0627. The examiner can normally be reached on Monday-Friday from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan, Ph.D., can be reached on (571)272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
S. Anna Jiang, Ph.D.  
Primary Examiner  
Art Unit 1617  
March 14, 2005